



Engineering Institute

LANL ♦ UCSD

The 17th Los Alamos Dynamics Summer School

June 6th-August 5th, 2016
Los Alamos National Laboratory

Los Alamos Research Park
TA-3, Bldg. 4200

Student Projects

IMAC Abstracts-Due June 17, 2016
Student Presentation Drafts I- June 24, 2016
Student Presentation Drafts II- July 8, 2016
Student Presentation Drafts III- July 22, 2016
Student Final Presentations-Due August 2&3, 2016

Week 1 June 6-10

Student Orientation
GET Training
Administrative and Training Details
Tutorials: Statistics, Data Acquisition, ABAQUS

Week 2 June 13-17

Tutorials: Signal Processing, Object Orientated Programming*, Matlab*
Guest Lectures:
Energy Harvesting – Scott Ouellette
Wireless Sensor Nodes – Stuart Taylor
Presentations – Phil Cornwell
IMAC Abstracts Due

Week 3 June 20-24

Tutorials: Modeling Dynamics Systems, Echo
Guest Lectures:
Weapons Engineering – Curtt Ammerman
Thinking Telescopes – Jim Wren
Student Presentations I

Week 4 June 27-July 1

Tutorials: Embedded Systems
Guest Lectures:
Ultrasonic NDE – Eric Flynn
Information Gap Analysis – Chris Stull

*Optional tutorials

Week 5 July 5-8

Tutorials: Model Verification and Validation
Guest Lectures:
Video Motion Magnification – Yongchao Yang
Multi-intelligence Data Analysis – Kendra Van Buren
Student Presentations II

Week 6 July 11-15

Tutorials: Controls
Guest Lectures:
LANL Satellites – Reiner Friedel
Density Measurements of Plutonium – Alex Marchi

Week 7 July 18-22

Tutorials: Nonlinear Systems
Guest Lectures:
Verification & Validation – Garrison Stevens
Computer Vision – Amy Larson
Student Presentations III

Week 8 July 25-29

Tutorials: Machine Learning
Guest Lectures:
Aerospace Systems – Nick Lieven
Inland Waterways – Matthew Smith

Week 9 August 1-5

Practice Sessions
Final Presentations
LADSS BBQ at Chuck's
Departure Processing/Lab Clean Up

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A G E N D A

Week 1, June 6-10

Monday, June 6

Orientation 03/4200/203 A & B (Los Alamos Research Park)

07:30 – 08:30 Badging-Students
08:30 – 09:00 Lunch Selection, Money Collection-All
09:00 – 09:15 Welcome-Dave Clark, NSEC
09:15 – 09:45 How to Get the Most from Your Internship- Emily Robinson, SPO
09:45 – 10:00 LA Chamber of Commerce
10:00 – 10:10 Student Worker Safety & Security-Christina Hanson, SWSST Rep,
10:10 – 10:20 *Break*
10:20 – 10:45 Taxation of Fellowships-Mike Cunningham, TPT
10:45 – 11:10 You and Your Safety-Ella Twary, DSESH-STO
11:10 – 11:20 Security-Andrew Wall-SEO-4
11:20 – 11:30 *Break, Distribute Lunches*
11:30 – 01:00 Lunch
01:00 – 02:30 Introduction to the 17th LADSS, Chuck Farrar, EI
02:30 – 02:40 *Break,*
02:40 - 03:30 Meet with Mentors
03:30 – 05:00 Proceed to Labs, Lab Inspections-Ella Twary-DSESH-STO

Tuesday

08:00 – 04:00 GET Training - White Rock

Wednesday

08:00 – 09:00 Administrative and Training Updates 03/4200/300 Break Room
09:30 – 01:00 Begin Projects

Thursday

08:00 – 09:30 Statistics I -Eric Flynn, San Ildefonso Room, 2nd Floor, Library
03:30 – 05:00 Data Acquisition- Eric Flynn, Viz Lab 03-4200-101

Friday

08:00 – 09:30 Statistics II- Eric Flynn, San Ildefonso Room, 2nd Floor, Library
03:00 – 05:00 ABAQUS- Miles Buechler, Viz Lab 03-4200-101

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Week 2, June 13-17

Monday, June 13

08:00 – 09:00 Signal Processing-Eric Flynn, San Ildefonso Room, 2nd Floor, Library
01:00 – 03:00 Matlab*-Dustin Harvey, NSEC Conference Room 03-4200-301

Tuesday, June 14

08:00 – 09:00 Signal Processing-Eric Flynn, San Ildefonso Room, 2nd Floor, Library
03:30 – 05:00 Energy Harvesting-Scott Ouellette, Viz Lab 03-4200-101

Wednesday, June 15

08:00 – 09:00 Signal Processing-Eric Flynn, San Ildefonso Room, 2nd Floor, Library
01:00 – 03:00 Object Orientated Programming*-Eric Flynn, NSEC Conf Room 03-4200-301

Thursday, June 16

08:00 – 09:00 Signal Processing-Eric Flynn, San Ildefonso Room, 2nd Floor, Library
03:30 - 05:00 Wireless Sensor Nodes-Stuart Taylor, Viz Lab 03-4200-101

Friday, June 17

01:00 - 02:30 Lecture: Making Effective Presentations: Rethinking Slide Design-Phil
Cornwell, Viz Lab 03-4200-101
05:00 IMAC Abstracts Due
6:00pm **Pizza Party at Francois'**

Week 3, June 20-24

Monday, June 20

08:00 – 09:30 Dynamic Systems- D.J. Luscher, San Ildefonso Room, 2nd Floor, Library
10:00 – 5:00 Echo Training – Dustin Harvey, Canyon Complex, Rm. 170

Tuesday, June 21

08:00 – 09:30 Dynamic Systems-D.J. Luscher, San Ildefonso Room, 2nd Floor, Library
03:30 – 05:00 Weapons Engineering-Curt Ammerman, Viz Lab 03-4200-101

Wednesday, June 22

08:00 – 09:30 Dynamic Systems-D.J. Luscher, San Ildefonso Room, 2nd Floor, Library

Thursday, June 23

08:00 – 09:30 Dynamic Systems-D.J. Luscher, San Ildefonso Room, 2nd Floor, Library
03:30 – 05:00 Thinking Telescopes-Jim Wren, Viz Lab 03-4200-101

Friday, June 24

08:00 – 09:30 Dynamic Systems-D.J. Luscher, San Ildefonso Room, 2nd Floor, Library
03:00 – 05:00 Student Presentations, Viz Lab 03-4200-101

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Week 4 June 27-July 1

Monday, June 27

08:00 – 09:30 Embedded Systems-David Mascareñas, NSEC Suite 03-4200-301

Tuesday, June 28

08:00 – 09:30 Embedded Systems-David Mascareñas, NSEC Suite 03-4200-301

03:30 – 05:00 Ultrasonic NDE- Eric Flynn, Viz Lab 03-4200-101

Wednesday, June 29

08:00 – 09:30 Embedded Systems-David Mascareñas, NSEC Suite 03-4200-301

Thursday, June 30

08:00 – 09:30 Embedded Systems-David Mascareñas, NSEC Suite 03-4200-301

03:30 – 05:00 Information Gap Analysis- Chris Stull, Viz Lab 03-4200-101

Friday, July 1

Embedded Systems-David Mascareñas, NSEC Suite 03-4200-301

Week 5- July 4-8

Monday, July 4 LANL CLOSED for 4th of July Holiday

Tuesday, July 5

08:00 – 09:30 Model Verification and Validation-Francois Hemez, San Ildefonso Room,
2nd Floor, Library

03:30 – 05:00 Video Motion Magnification-Yonchao Yang, Viz Lab 03-4200-101

Wednesday, July 6

08:00 – 09:30 Model Verification and Validation-Francois Hemez, San Ildefonso Room,
2nd Floor, Library

Thursday, July 7

08:00 – 09:30 Model Verification and Validation-Francois Hemez, San Ildefonso Room,
2nd Floor, Library

03:30 – 05:00 Multi-intelligence Data Analysis-Kendra Van Buren, Viz Lab 03-4200-101

Friday, July 8

08:00 – 09:30 Model Verification and Validation-Francois Hemez, San Ildefonso Room,
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03:00 – 05:00 Student Presentations, Viz Lab 03-4200-101

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Week 6 July 11-15

Monday, July 11

08:00 – 09:30 Controls-Alex Scheinker, San Ildefonso Room, 2nd Floor, Library

Tuesday, July 12

08:00 – 09:30 Controls-Alex Scheinker, San Ildefonso Room, 2nd Floor, Library

03:30 – 05:00 LANL Satellites-Reiner Friedel, Viz Lab 03-4200-101

Wednesday, July 13

08:00 – 09:30 Controls-Alex Scheinker, San Ildefonso Room, 2nd Floor, Library

Thursday, July 14

08:00 – 09:30 Controls-Alex Scheinker, San Ildefonso Room, 2nd Floor, Library

03:30 – 05:00 Density Measurements of Plutonium: Why It Matters and Why It's Difficult, Viz Lab 03-4200-101

Friday, July 15

08:00 – 09:00 Controls-Alex Scheinker, San Ildefonso Room, 2nd Floor, Library

Week 7 July 18-22

Monday, July 18

08:00 – 09:00 Non Linear Systems, NSEC Suite 03-4200-301

Tuesday, July 19

08:00 – 09:00 Non Linear Systems, NSEC Suite 03-4200-301

03:30 – 05:00 Verification and Validation-Garrison Stevens, Viz Lab 03-4200-101

Wednesday, July 20

08:00 – 09:00 Non Linear Systems, NSEC Suite 03-4200-301

03:00 – 05:00 Applying to Graduate School, Viz Lab 03-4200-101

Thursday, July 21

08:00 – 09:00 Non Linear Systems, NSEC Suite 03-4200-301

03:30 – 05:00 Computer Vision-Amy Larson, Viz Lab 03-4200-101

Friday, July 22

03:00 – 05:00 Student Presentations III, Viz Lab 03-4200-101

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Week 8 July 25- 29

Monday, July 25

08:00 – 09:30 Machine Learning-Worden/Harvey, San Ildefonso Room, 2nd Floor,
Library

Tuesday, July 28

08:00 – 09:30 Machine Learning-Worden/Harvey, San Ildefonso Room, 2nd Floor,
Library

03:30 – 05:00 Aerospace Systems-Nick Lieven, Viz Lab 03-4200-101

Wednesday, July 27

08:00 – 09:30 Machine Learning-Worden/Harvey, San Ildefonso Room, 2nd Floor,
Library

Thursday, July 28

08:00 – 09:30 Machine Learning-Worden/Harvey, San Ildefonso Room, 2nd Floor,
Library

03:30 – 05:00 Inland Waterways-Matthew Smith, Viz Lab 03-4200-101

Friday, July 29

08:00 – 09:30 Machine Learning-Worden/Harvey, San Ildefonso Room, 2nd Floor,
Library

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Week 9 August 1-5

Monday, August 1 Practice Sessions, Vlz Lab 03-4200-101

08:00 – 09:00	Group 1-
09:00 – 10:00	Group 2-
10:00 – 11:00	Group 3-
11:00 – 01:00	Lunch Break
01:00 - 02:00	Group 4-
02:00 - 03:00	Group 5-
03:00 – 04:00	Group 6-
04:00 – 05:00	Group 7-

Tuesday, August 2 Presentations- *all presentations are in 03-4200-101*

03:00 – 03:30	Presentation Group 1
03:40 – 04:10	Presentation Group 2
04:20 – 04:50	Presentation Group 3

Wednesday, August 3 Presentations- *all presentations are in 03-4200-101*

08:00 – 08:30	Presentation Group 4
08:40 – 09:10	Presentation Group 5
09:20 – 09:50	Presentation Group 6
10:00 – 10:30	Presentation Group 7

Thursday, August 4

11:30 – 03:00	Departure Processing
03:00 – 05:00	Lab Clean up and Equipment Return
05:30	LADSS BBQ at Chuck Farrar's house

Friday, August 5

08:00-12:00	Summer School Survey Discussion and Wrap Up (301 Break Room)
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